

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

**Applicant:** Raymond R. Nieser, et al                   : **Paper No:**  
**Serial No.** 10/800,070                                   : **Group Art Unit:** 3651  
**Filed:** March 12, 2004                               : **Examiner:** Bidwell  
**For:** SORTATION CONVEYOR

**MAIL STOP: Patent Application**  
**Commissioner For Patents**  
**P. O. Box 1450**  
**Alexandria, VA 22313-1450**

**DECLARATION OF ROGER ALDERINK UNDER 37 C.F.R. § 1.132**

**Dear Sir:**

**I, Roger Alderink (hereinafter "Declarant"), declare as follows:**

1. From 1962 to 2001, I was employed in the material handling industry. I have extensive experience in the material handling industry, specifically the mechanized distribution market, and more specifically with positive sortation sorters. During this time period, my responsibilities included designing and developing positive sortation sorters, managing engineers and others who were designing and developing positive sortation sorters, and product planning. Attached as Attachment A is a listing of my education and work history and a brief summary of my sorter experience.

2. All positive sortation shoe sorters have in common a series of shoes that are diverted against a divert guide track which causes the shoe to change the direction of the carton thus diverting it from the sorter to a take away line. The early sorters had an angle of contact of 30 degrees and, as the speeds of sorters increased, later sorters had an angle of contact of 20 degrees.

3. I reviewed the video, attached as a file named "10-800070" on the attached CD, identified as Attachment B. The video illustrates the problems that occur when prior art sorters

are operated at high speeds to increase the cartons per minute rate, such as a speed of 650 feet per minute. The video also illustrates sortation of cartons at a divert location constructed in accordance with pending claims of United States Patent Application Serial Number 10/800,070 as I mention more fully below. Based on my experience and knowledge of the sorter field, at least prior to March 12, 2003, the initial approach of an engineer or other person skilled in positive sortation to overcoming this problem would be to decrease the take away angle, change the shoe design to reduce impact on the carton, or figure out a way to reduce the carton gap so there could be a corresponding reduction in speed.

4. Upon my initial review of United States Patent Application Serial No. 10/800,070, Publication # US 2005/0000779 A1, my immediate reaction was that this was a clever and unique idea to use a radius in the divert guide track to reduce the impact of the divert shoe on the carton, it being a minor compromise in the distance between take away lines and a major gain in reducing the lateral acceleration caused by the impact of the shoe on the carton which is what causes the cartons to go out of control.

5. Subsequent to my initial review of the '070 application, I read the '070 application completely, including the patent claims, and have formed an understanding of the application and its claims. It is my understanding that the divert location shown in the video has a switch a straight section downstream of the switch at an angle of 3 degrees, followed by a curved track having a radius of 15 feet. The entrance to the curved track is at a 3 degree angle, matching this first straight section. The exit of the curved track is disposed at 20 degrees, matching the angle of the straight section downstream of the curved track. Although only one divert location is seen in the video, a sorter would have more than one identically constructed divert location. A sorter with more than one such divert location meets the limitations of at least currently pending claims 13-19, 21, 23-32, 35, 37-44, 46, 48, 53, and 175.

6. Subsequent to my initial review of the '070 application, I read the Office Action dated September 25, 2007, and United States Patent No. 5,967,289 (Kelsey) and United States Patent No. 6,419,073 (Piron).

7. The sorter of the '070 application is a positive sortation sorter. Development of positive sortation is only encountered in the mechanization of distribution market. This is a large segment of business but the number of companies that service this market is rather limited. When we talk about high speed positive sortation the number of companies that serve this segment of the mechanized distribution market is less than a dozen suppliers. There are not many engineers or other persons that are familiar with technical and application issues that are encountered with positive sortation. Based on my experience, none of the engineers or other persons who design or develop positive sortation sorters, even if familiar with the type of device disclosed by the '073 patent, would consider such type of device relevant to overcoming the problems of increasing the cartons per minute rate or operating sorters at higher speeds. The device disclosed by the '073 patent is used in a different industry and its application is for moving product from one conveyor line to another line that is running parallel. As such the device disclosed in the '073 patent carries the product by using a platen in contrast to the positive sorters which push the product laterally off the sorter and onto a take away conveyor. In my opinion the Piron Sorter patent is not relevant to the '070 application, and would not be considered relevant to the '070 application by engineers or other persons who design or develop positive sortation sorters.

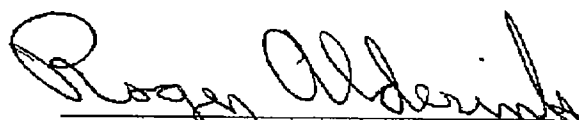
8. The sorter shown in the '289 patent has a straight guide rail, different from the curved guide rail of the '070 application. Prior to the '070 application, only straight guide rails were used on positive sortation sorters. There have been positive sortation sorters that included guide rails with a bend. Such bends were sharp, having a very small radius and typically occurring in sections of the guide track having a 20° or more divert angle. Such bends do not overcome the problems that occur when sorters are operated at high speeds to increase the cartons per minute rate. The '289 patent's focus is on the switch mechanism which deals with problems associated with getting the shoe to start its divert. The '289 patent does not deal with what happens to the product when the shoe contacts the product.

9. Are the differences between using a guide path that is linear and mounted at an angle to effect the divert and using an arcuate guide path obvious to the persons having ordinary skill in this design area? My opinion is NO! This is my opinion for the sorter as claimed: A sorter with an arcuate guide path with an entrance disposed less than 20 degrees, and a sorter with a divert

guide path having a plurality of divert angles with an initial contact zone portion disposed at less than 20 degrees are both not obvious. For the past several decades, development engineers at at least a dozen suppliers have spent millions of dollars and thousands of hours attempting to enhance positive sortation. It should be noted that the '070 application is the 1<sup>st</sup> time that anyone in the area of positive sortation has ever used this concept of an arcuate guide path. I am aware of over 100 patents that address unique ideas in the area of positive sortation which include units that handle up to 200 cartons per minute and no supplier has ever used an arcuate guide path for the purpose of controlling the acceleration of the package being conveyed. Hundreds of engineers, including myself, have never thought of this before. It is unique and not obvious to a person having ordinary skill in this design area.

10. The Declarant states that all statements made herein of actual knowledge are true, or if made on information and belief are believed to be true.

11. The Declarant further states that all statements made herein were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such willful false statements may jeopardize the validity of this patent application or any patent issuing thereon.

  
Roger Alderink

7/25/08  
Date

## **ATTACHMENT A**

**Roger Alderink**  
**4502 Eastshore Dr., Caledonia, MI**

### **EDUCATION**

**1959 Associate Degree - Mechanical Engineering, Ferris State University**

### **Work History**

2001 Retired

1988 - 2000 **Alvey Systems, Inc.,** a Pinnacle Automation Company

1995 to December 2000 – Vice President, New Business Development & Product Management

Position reported to the President and CEO of Pinnacle Automation.

Responsibilities:

- Developing business plans for strategic areas of the company.
- Investigating new market opportunities, exploring the needs of these respective markets and identifying the product and service needs.
- Directing and training those involved in the identification of new conveyor product needs, its development requirements, the status and necessary commercialization.

1988 - 1995 - Vice President of Engineering

Position reported to the President of Alvey Systems, Inc., 9301 Olive Blvd., St. Louis, MO 63132

Responsibilities:

- Sales Engineering – Provide sales with technical concept support, proposal generation and estimating for all major system level projects.
- Systems Engineering – Provide post-order systems design, order processing, installation layouts and field commissioning. Functions included application engineering mechanical layout, order entry, controls and software design.
- Design Engineering – Provide design of modified standard and special devices required for major systems and product development of heavy duty product lines.
- Product Management - Identification of corporate technology needs, necessary standard conveyor, product needs, product requirements and their respective commercialization activities.
- Engineering Services – Drawing control room, technical documentation control, corporate ISO document control.
- Process Automation -- Development, training and maintenance of processes related to the automation of the technical process within the company.

1962 - 1988

**Rapistan Corp.,** 507 Plymouth Avenue, N.E., Grand Rapids, MI 49505

1982 - 1988	<u>Manager, Marketing Development</u>
1980 - 1982	<u>Manager of Distributors, Select Accounts and Government Sales</u>
1978 - 1980	<u>Manager of Research and Development</u>
1977 - 1978	<u>Product Planning</u>
1974 - 1977	<u>Manager of Concepting and Estimating</u>
1968 - 1974	<u>Systems Engineering Section Manager</u>
1964 - 1968	<u>Project Engineer</u>
1962 - 1964	<u>Mechanical Designer</u>

**Sorter Experience:** Requirements, design, and application

A continuous thread through out my carrier was maintaining an awareness of competitive capability and the involvement of providing direction for leading edge sortation programs.

Early 70's – One of three persons at Rapistan involved in creating a new sorter design that raised the sorter thru-put rate from around 30 to 40 cartons per minute to a sustained rate of 90 cartons per minute.

Mid 70's Instrumental in leading the Material Handling Institute in the development of their 1<sup>st</sup> sortation brochure.

Late 70's Led the design team at Rapistan in the development of Rapistan's steerable roller sorter which sorted at 120 cartons per min.

Mid 80's was part of the design team at Rapistan that developed Rapistan's 1<sup>st</sup> sliding shoe tube sorter which sorted at 140 cases per minute.

Late 80's: Conducted market studies at Rapistan that identified the need for sortation rates up to 300 cartons per minute, the need to provide a conveying surface that would handle a larger variety of cartons having inferior bottoms.

Early 90's Managed the redevelopment of the Alvey positive sorter to increase their capacity to 150 cpm.

Early 2002: Expert technical witness in a international patent dispute between Rapistan and Van Der Lande of the Netherlands.